MemCor

DUPONT

Product Data Sheet | Membrane Bioreactor (MBR)

DuPont™ MemPulse™ B40N Membrane Filtration Module

Key Features

Proven N PVDF Fibers:

- Excellent permeability fiber.
- Enchanced chemical and abrasion resistance.
- Optimized dimensions to maximize packing density with high solid tolerance.

Module Design:

- Large sinlge non-cassette module area.
- High packing density with high solid loading tolerance.
- High quality effluent.
- Energy-efficient aeration design with low maintenance & operation costs.
- Optimized design to suit large size installations.
- Robust fibers that do not require slack adjustment.
- In-tank cleaning.

Key Applications

New and retrofit submerged filtration of bioloigcal mixed liquour suspeneded solids water in:

- Municipal treatment.
- Industrial treatment.
- Nutrient removal.
- RO Pre-treatment.
- Re-use of wastewater (municipal & industrial) – irrigation, human contact & IDPR/DPR.

Module Specification

General		
Part Number / GMID	12089749 / Smart PN 118317	
Mode of Filtration	Out-In MBR	
Membrane Type	Hollow fiber	
Membrane Material	PVDF (Polyvinylidene Fluoride)	
Membrane Pore Size	0.04 µm	
Module Operating Process	Dead-end	
Other Wetted Module Components	Polyurethane, Fibreglass, Polyamide, Silicone Rubber, SS316	
Dimensions		
Active Membrane Area	40.0 m^2	431 ft^2
Module Length (Overall) (L)	1600 mm	63 in
Module Width	203 mm	8.0 in
Weight & Volume		
Shipping Weight	19 kg	42 lbs
Weight Empty	19 kg	42 lbs
Weight Filled	n/a	
Hold-Up Volume Feed (Clean-In-Place = CIP)	n/a	
Hold-Up Volume Filtrate (CIP)	n/a	

NSF

Certified to NSF/ANSI/CAN 61

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Suggested Operating Conditions

General	Details	
Operating Temperature Range	1 – 40 °C	34 – 104 °F
Temperature Range for Transportation & Storage [1]	Preferred range 5 to 25 °C / 41 to 77 °F Allowable range > 0 to 40 °C / > 32 to 104 °F	
Operating pH	6.0 – 9.0 pH [2]	
Cleaning pH	2 – 10.5 pH Typical	
Backwash Type	Relaxation	
Operating Limits (Maximum)	**Details**	
Rate of Temperature Change	Not specified	
Maximum Allowable TMP at any time	+0.75 bar / -1.10 bar	+ 11 psi / - 16 psi
Filtration TMP [3]	0.05 – 0.65 bar	0.7 – 9.4 psi
Backwash TMP [3]	≤ 0.5 bar	≤ 7 psi
Filtration Flux	Up to 50 L/(m²h)	Up to 29.5 gfd
Filtration Flow	Up to 2 m³/h	Up to 8.8 gpm
Backwash Flux	Up to 35 L/(m²h)	Up to 20.6 gfd
Backwash Flow	Up to 1.4 m³/h	Up to 6.2 gpm
Particle Size	2,000 µm (with primary sedimentation otherwise < 1,500 µm)	
Exposure NaOCl [4]	≤ 1,000,000 ppm x h (at pH ≥ 6.5, 25 °C)	
Typical Maintenance Clean Concentration NaOCl [4]	150 – 600 ppm @ 20 °C	50 – 600 ppm @ 68 °F
Typical Concentration NaOCl Recovery Clean [4]	600 – 1,500 ppm @ 20 °C	600 – 1,500 ppm @ 68 °F

[1] Shipment/storage in a temperature controlled container (or reefer) at 20 °C / 68 °F recommended.) Modules must not be exposed to freezing conditions and must remain moist at all times.

[2] If pH is above 7.5 ensure the LSI < 0.5

[3] Maximum available filtration TMP is based on a number of variables including atmospheric pressure, module submergence depth and filtrate pump NPSH requirement. The actual value may vary slightly from that shown.

[4] The recommendation for maximum chlorine cleaning solution concentration is to account for an initial rapid consumption of chlorine at the start of an MC or CIP cleaning cycle. The targeted chlorine cleaning solution concentration is then typically 200 to 1000 ppm for the remainder of the cycle.

[5] Please consult DuPont Water Solutions for additional guidance on exposure limits and for operation at different temperatures.

General Information

- Please refer to the latest version of the DuPont™ MemPulse™ MBR Module Handling, Rack Assembly, Maintenance and Operation Manuals.*
- Unless expressly agreed within a project warranty, if operating limits and guidelines given in this document are not strictly followed, any warranty will be null and void.
- Please refer to the Operating & Maintenance Manual for controlling biological growth during extended system shutdowns, including the use of storage solutions.*
- Please consult DuPont Water Solutions for additional guidance on exposure limits and for operation at different conditions.

Regulatory Note

- Initial flushing of new modules followed by a cleaning cycle is recommended prior to use. Please refer to the technical bulletin Guidelines for flushing new MemCor™ 'N' Modules for further details.*
- Drinking water modules may be subjected to additional regulatory restrictions in some countries. Please check local regulatory guidelines and application status before use.

* Please contact your sales representative and request the latest version of the manual

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